UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,766	10/01/2003	Michael K. Schumacher	84,355-005	7912

7590 03/10/2006	EXAMINER
JOHN W. REES	BATAILLE, PIERRE MICHE
DYKEMA GOSSETT PLLC	

ART UNIT	PAPER NUMBER
2186	

SUITE 300
39577 WOODWARD AVENUE
BLOOMFIELD HILLS, MI 48304

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*10 June 2004*</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/10/04</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is taken in conjunction to examination of the instant application

presenting claims 1-36 for examination.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13: the claimed invention lacks patentable utility. The limitation

"performance of said method" is simply an abstract idea. It would be impossible to one

of ordinary skill in the art to determine the performance of said method.

Claim 16-25: the claimed invention is directed to non-statutory subject matter. "A

program is non-patentable unless specifically stating "instructions stored on a tangible

medium and executable by a machine".

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by us 2004/0078540 (Cirne et al).

With respect to claims 1, 16, and 26, Cirne discloses the method of detecting memory leakage for JAVA virtual machine application executing on a computer, as claimed *(see Paragraphs 0015-0019)*, comprising:

(A) monitoring allocated memory levels and filtering out increases in peak allocated memory levels not indicative of a memory leak associated with said program *(looking for and flagging collections that appear to be growing in size and reporting a flagged collection which no longer appears to be leaking)*;

(B) determining a memory leakage rate when a peak allocated memory level has increased a determined number of times *(identifying potential sources of memory leaks by tracking growth patterns of groups of stored items before a time-out period expires)*;

(C) producing an alarm response when the determined leakage rate exceeds a pre-selected level *(collection reported if the growth pattern of a collection indicates that it may be the source of a memory leak) (see Paragraphs 0015-0019)*.

With respect to claims 2-8, Cirne discloses the method of: determining when a peak allocated memory level has increased a determined number of

times is performed during a determined time interval *(time-out period set for monitoring growth pattern, Par. 0017)*.

With respect to claims 3, Cirne discloses filtering out increases in peak allocated memory levels not indicative of a memory leak associated with said program *(reporting a flagged collection which no longer appears to be leaking; Par. 0017)*.

With respect to claims 4, Cirne discloses ignoring increases in peak allocated memory levels during a startup time interval immediately after said program begins to execute *(discontinuing track of newly allocated collections if no longer appear to be leaking; Par. 0016-0017)*.

With respect to claims 5, Cirne discloses ignoring increases in peak allocated memory levels that occur less than a pre-selected time apart, which may be indicative of normal memory allocation activity *(reclassifying stored group which appears not to a leaking; Par. 0019)*.

With respect to claims 6-8, Cirne discloses determining a memory leakage rate when the peak allocated memory level has increased said determined number of times during a determined time interval *(tracking collection as metric data and reporting the tracking of group of stored items reported as*

being a potential source of a memory leak if the received size satisfies the current value of a threshold; Par. 0016, 0019).

With respect to claims 11-12, Cirne discloses recording the response and generating an alarm signal when the leakage rate exceeds a pre-selected level *(tracking collection as metric data and reporting the tracking of group of stored items reported as being a potential source of a memory leak if the received size satisfies the current value of a threshold; Par. 0016, 0019).*

With respect to claims 17-21, Cirne discloses the invention as claimed, determining memory leakage dung a predetermined time interval, executing Java virtual machine application program on a first computer, the computer being part of a network system, said program being executed in part on a second computer *(Fig. 2; Par. 0033).*

With respect to claims 9-10, 22-25, and 33-34, Cirne discloses selecting at least one operating parameter from the group including said determined number of times of peak allocated memory level increases, said determined time interval, said pre-selected level of said memory leakage rate, a sampling rate at which said monitoring step is performed, a startup time interval in which increases in peak allocated memory levels are filtered out, a time delay between increases in the peak allocated memory levels for which such increases are ignored as to said determined number of times the peak allocated memory level has increased, and

said response; and providing an interface for said second computer program that allows a user to specify a value for said at least one operating parameter; configuring said interface so as to allow a user to specify a plurality of values for a corresponding plurality of said operating parameters *(Par. 0032-0035)*.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,523,141 discloses identifying memory leaks by identifying an abnormal number of memory allocations.

US 2005/0081190 (Betancourt et al) teaches automatic memory leak detection and remediation.

US 6,658,652 (Alexander, III et al) teaches memory leak detection and heap analysis in object-oriented environment.

"Run-Time Library Reference", Microsoft Corp., http://msdn2.microsoft.com/en-us/library(d=robot)/d41t22sb.aspx, Windows Operating System, v. 1998-2003.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon-Fri (8:00A to 4:30P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pierre-Michel Bataille
Primary Examiner
Art Unit 2186

February 27, 2006

PIERRE BATAILLE
PRIMARY EXAMINER